

RANCHO SANTA ANA BOTANIC GARDEN
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FREMONTIA MEXICANA
FREMONTIA

1942

RANCHO SANTA ANA BOTANIC GARDEN
of the
NATIVE PLANTS OF CALIFORNIA
Santa Ana Cañon, Orange County, California
Established 1927 in Memory of
JOHN W. BIXBY

FREMONTIA MEXICANA
FREMONTIA

Sterculiaceae

Sterculia Family

Evergreen shrub 10-20 ft. high, slender, or broad when in full sun; tree-like with a single trunk 2-4 in. in diam., or much-branched from the base; younger branches, foliage and flower parts stellate-pubescent; branches usually long and flexible; short lateral spurs bearing the alternate leaves and flowers. Leaves with petioles $\frac{1}{2}$ -1 in. long, blades dark green above, rusty-pubescent beneath, variously 3-5-lobed (occasionally entire), ovate, oblong or elliptic 1-3 in. long. Flowers solitary, disposed along the branches, appearing as long, leafy racemes; pedicels $\frac{1}{4}$ - $\frac{1}{2}$ in. long; bracts beneath calyx 3-5, deciduous, narrow, about $\frac{1}{2}$ in. long; petals lacking; calyx petaloid, flower buds nearly $1\frac{1}{2}$ in. long, $\frac{3}{4}$ in. wide at base, acutely tapered and conspicuously 5-angled; upon opening the 5 sepals form a low bowl-shaped flower $2\frac{1}{2}$ - $3\frac{1}{2}$ in. across, rich orange-yellow to reddish tinged without and clear yellow within; gland at base of each sepal hairless; stamens 5, united below into a tube around the single, unbranched style; anthers 2-celled, $\frac{3}{8}$ in. long. Ovary 5 or occasionally 4-celled, producing an angular, ovoid, acutely pointed, densely stellate-pubescent, loculicidal capsule; seeds several in each cell, shiny black, ellipsoidal, about $\frac{1}{8}$ in. long. In germination the seed coat appears above ground with the petioled, $\frac{1}{2}$ in. long, ovate, entire cotyledons; later leaves become increasingly more like those on mature plants.

The genus *Fremontia* was proposed in 1853 by Prof. John Torrey in honor of General John C. Fremont (1813-1890), noted soldier, pathfinder and first United States Senator from California. The original specimens of *F. californica* were discovered by Fremont on the "Sources of the Sacramento, in the northern part of the Sierra Nevada of California." It was long thought to be the only species, but *F. mexicana* is amply distinct. *F. crassifolia* and *napensis* may also eventually prove to be really distinct. *Fremontodendron* was proposed in 1893 by Coville to replace *Fremontia* because the latter was then believed to be untenable.

Fremontia mexicana, as we understand the species, is confined to extreme southern San Diego Co. and to the northern portions of Baja California. It differs from the well known *F. californica* in numerous features, the most important being its more rapid growth, larger leaves with rusty rather than gray pubescence, larger flowers of orange or reddish-orange, hairless glands at base of sepals and black shiny seeds.

About 50 years ago Miss K. O. Sessions (1859-1940), beloved San Diego horticulturalist, acquired a new nursery site in San Diego upon which she found growing two plants of *Fremontia* which she thought were from seeds or plants introduced by C. R. Orcutt (1864-1929). In the years that followed, Miss Sessions propagated and sold or distributed plants of *Fremontia* from these two bushes and was under the impression that they were *F. californica*. Later she obtained seeds of *F. californica* from Theodore Payne, specialist in California native plants. When these bloomed she discovered that they were radically different from her or-

iginal *Fremontia* plants, and thereupon communicated the information to Mr. Payne who requested a specimen, which she sent in the spring of 1917. Mr. Payne took this specimen to Dr. Anstruther Davidson (1860-1932), who published the plant as a new species under the name of *Fremontodendron mexicanum* in 1917. A year later Macbride transferred the species to *Fremontia*.

Largely through the efforts of Miss Sessions and Mr. Payne, *Fremontia mexicana* was extensively propagated and became one of the most popular of all California native shrubs because of its profusion of rich orange-yellow flowers. Seeds sent to Thomas Hay, Sup't. of London Parks, by Fred Howard, Los Angeles nurseryman, in 1926, produced plants which served as the basis for an illustration and description of the species in Curtis Botanical Magazine, plate 9269, in 1929.

A specimen of *Fremontia mexicana* collected over 60 years ago by Daniel Cleveland from near San Diego is now at Harvard University, but it is not definitely known whether it came from San Diego Co. or from adjacent Baja California. To the best of our knowledge the first authentic collection of *F. mexicana* from California was made by Mr. F. F. Gander of the San Diego Natural History Museum, who discovered an extensive colony in 1936 on the northwest side of Otay Mt. In June, 1936 we accompanied Mr. Gander to the above locality. There, at 1500-2000 ft. elevation, scattered along the borders of a narrow canyon were numerous individuals 15-20 ft. high and some equally broad, but most of the plants were slender and partially shaded by the adjacent thickets of *Cupressus Forbesii*. Thus after many years *Fremontia mexicana* was actually proven a native of California, and the locality may well be the one "15 miles from San Diego" as credited to Orcutt by Miss Sessions for the origin of her original cultivated plants.

We have grown limited quantities of *Fremontia mexicana* at the Garden since about 1930, but never felt justified in propagating the species extensively until after Mr. Gander had verified its occurrence within California. From seeds obtained on Otay Mt. in 1936 we grew a number of plants which have now attained heights of over 8 ft., providing seeds for additional propagating.

Seeds of *Fremontia* germinate readily from late fall until early spring provided the seed coat is softened by sandpapering, immersion in hot water (160-180° F.), or soaking in a weak lye solution. Planting of seeds directly in small containers is recommended to avoid losses in early transplanting. Potting soil should be coarse and well drained with little humus and the containers should be large to avoid coiled roots. A sunny or only partially shaded site in coarse, well drained soil is essential for permanent plantings. All planting out should be done from late fall until early spring so that the plants can become established before summer, thus avoiding the necessity of excessive irrigation the first season. When once established the plants need no irrigation. Specimens in heavy soil, or where irrigated throughout the year, make rapid growth for several years, then usually die suddenly from attacks of root fungi.

CARL B. WOLF

RANCHO SANTA ANA BOTANIC GARDEN

Dedication of Garden Foundation to the Board of Trustees for the Rancho Santa Ana Botanic Garden of the Native Plants of California:

"THE NATURE, OBJECT AND PURPOSE OF THE INSTITUTION
HEREBY FOUNDED AND TO BE MAINTAINED HEREUNDER.

ITS NATURE: A botanic garden of the native plants of California, herbarium and botanical library, containing living and/or preserved specimens of trees, plants and flowers native to California, and literature relating thereto.

ITS OBJECT: The preservation and improvement of the property now transferred and such property as may hereafter be transferred to the Trustees for those who not only wish to enjoy, but to study, assembled in one accessible locality, native California plants; and for the advancement of science and education with reference to plant life indigenous to the State of California.

ITS PURPOSES: (a) An institution founded primarily for scientific research in the field of local botany.

(b) To preserve the native California flora, try to replenish the depleted supply of some of the rarest plants which are rapidly being exterminated, and bring together in a comparatively small area as complete a collection of the rich store of native California plants as can be grown in this southern section of the state, thereby promoting the general welfare of the people of the state by providing the means for encouraging and carrying on the above mentioned activities in said state and by doing such other things as may be necessary and desirable to carry out the objects hereof."

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